

## REMARKS

Entry of the foregoing, re-examination and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.112, and in light of the remarks which follow, are respectfully requested.

Claims 34-36 have been amended in response to issues raised in the Office Action. Support for the amendments may be found in the specification on page 3, lines 36-28. Claims 22-24, 28, 29 and 31-36 are currently pending in this application.

Claims 34-36 were rejected under 35 U.S.C. §112, first paragraph, as non-enabling for the reasons given in paragraph (5) of the Office Action. Reconsideration of this rejection is requested in view of the above amendments and for at least the following reasons.

The aminonitriles specifically disclosed in the passage on page 4, lines 1-8 of the specification and referred to in the Office Action are linear or branched aliphatic compounds containing from 3 to 12 carbon atoms. Claims 34-36 have been amended to specify that the aminonitriles are linear or branched aliphatic compounds containing 3 to 12 carbon atoms. As such, they are similar in this respect to claim 29 which has not been rejected on this ground.

Applicants point out that the Examiner has the initial burden to establish a reasonable basis to question the enablement provided for the claimed invention. *In re Wright*, 999 F.2d 1557, 27 U.S.P.Q.2d 1510 (Fed. Cir. 1993). In fact, a specification disclosure which contains a teaching of the manner and process of making and using an invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented must be taken as

being in compliance with the enablement of 35 U.S.C. §112, first paragraph, unless there is a reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support. See M.P.E.P. §2164.04 and *In re Marzocchi*, 439 F.2d 220, 169 U.S.P.Q. 367 (C.C.P.A. 1971). Here, the Examiner has not satisfied the initial burden of establishing a reason to doubt the statements contained in the specification. The Examiner has only presented conclusions with no factual basis nor cogent reasons to support the position that the specification is non-enabling.

The first paragraph of 35 U.S.C. §112 merely requires that the specification enable one skilled in the art to make and use the invention without undue experimentation. See *In re Borkowski*, 164 U.S.P.Q. 642 (C.C.P.A. 1970). A detailed description or working example of every possible embodiment falling within a particular claim simply is not (nor has it ever been) a requirement of the first paragraph of 35 U.S.C. §112. In this regard, it is not the function of claims to specifically exclude possible inoperative embodiments. See, e.g., *In re Dinh-Nguyen*, 181 U.S.P.Q. 46 (C.C.P.A. 1974); *Ex parte Janin*, 209 U.S.P.Q. 761 P.O.B.A. 1979); and *Ex parte Jackson*, 217 U.S.P.Q. 804 (P.O.B.A. 1982). The breadth of the claims is irrelevant so long as they set forth an invention which is described in the specification such that one skilled in the art can make and use the invention. The Examiner should determine what each claim recites and what the subject matter is when the claim is considered as a whole, not when its parts are analyzed individually.

With the above principles in mind, applicants respectfully submit that the scope of enablement in the present application is commensurate in scope with the

claims when considered as a whole. Those skilled in the art would be able to practice the claimed invention given the information in the disclosure coupled with the level of knowledge and skill in the art. The scope of enablement only needs to bear a "reasonable correlation" to the scope of the claims. As the Court stated in *In re Goffe*, 542 F.2d 564, 567, 191 U.S.P.Q. 429, 431 (C.C.P.A. 1976), "[T]o provide effective incentives, claims must adequately protect inventors. To demand that the first to disclose shall limit his claims to what he has found will work or to materials which meet the guidelines specified for "preferred" materials in a process such as the one herein involved would not service the constitutional purpose of promoting progress in the useful arts."

For at least the above reasons, applicants respectfully submit that the §112, first paragraph rejection should be withdrawn. Such action is earnestly solicited.

Claims 34-36 were rejected under 35 U.S.C. §112, first paragraph, for the reasons set forth in paragraph (6) of the Office Action. Reconsideration and withdrawal of this rejection are requested in view of the above amendments and for at least the reasons which follow.

As suggested by the Examiner in the last sentence of paragraph (6), claims 34-36 have been amended to incorporate the written description on page 3, line 26 to page 4, lines 1-15 of the specification which discloses the preferred aminonitrile starting materials. Accordingly, this rejection has been obviated and should be withdrawn and such action is respectfully requested.

Claim 36 was rejected under 35 U.S.C. §112, second paragraph, for the reason provided in paragraph (7) of the Office Action. Reconsideration of this rejection is respectfully requested for at least the following reasons.

The legal standard for determining compliance with the second paragraph of 35 U.S.C. §112, is whether the claims reasonably apprise those of ordinary skill in the art of their scope. See In re Warmerdam, 33 F.3d 1354, 1361, 32 U.S.P.Q. 2d 1754, 1759 (Fed. Cir. 1994). In determining whether this standard is met, the definiteness of the language employed in the claim must be analyzed, not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art. In re Johnson, 558 F.2d 1008, 1015, 194 U.S.P.Q. 187, 193 (C.C.P.A. 1977).

Applicants disagree with the position of the Examiner that the language "a temperature at which vaporization of the mixture is complete" is ambiguous and indefinite. Process conditions are discussed throughout the specification. The working Example on page 7 of the specification provides specific reaction conditions and directions on how to practice the claimed process. Those of ordinary skill in this art familiar with the teachings of the prior art and having read the present specification, would clearly be able to ascertain the meaning of the above-quoted language and be apprised of the scope of claim 36.

For at least these reasons, the §112, second paragraph rejection of claim 36 should be withdrawn. Such action is earnestly solicited.

Claims 22-24, 28, 29 and 31-36 were rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 6,262,259 to Cotting et al for the reasons set forth in paragraph (8) of the Office Action. Reconsideration and withdrawal of this rejection is respectfully requested for at least the reasons which follow.

The present claims relate to a process wherein water in a vapor state is used as a carrier gas for liquid aminonitrile to introduce the aminonitrile into an evaporation chamber which also acts as a mixing chamber and thereafter contacting the mixed vapor with a catalyst in a hydrolysis reactor to produce the desired lactams. Thus, one of the reactants (water) is used in the vaporization of the other reactant to obtain a mixture in a very short period of time and to reduce to a minimum, the duration of time the aminonitrile is in the vapor state before coming in contact with the catalyst. By reducing the duration of time, the present invention thereby avoids the production of byproducts such as oligomers.

Cotting et al '259 neither discloses or suggests the presently claimed process. The reference discloses in column 4, lines 21-25, three alternatives for introducing water and aminonitrile into the reactor:

- (1) both reactants are charged to the reactor in the form of mixtures in the vapor state;
- (2) both reactants are separately introduced into the reactor;
- (3) each reactant is vaporized and the vapors separately added to the reactor.

Applicants have shown in Comparative Example 1 on page 8 of the specification that inferior results are obtained when a vaporized mixture of the reactants is charged to the hydrolysis reactor. Thus, the presently claimed process provides unexpected results which could not have been predicted from the disclosure of Cotting et al '259.

Applicants also point out that Cotting et al '259 is disqualified as prior art pursuant to 35 U.S.C. §103(c). Thus, Cotting et al '259 is assigned on its fact to Rhoneapoulencl Fiber & Resin Intermediates of Courbevoie Cedex, France. The present application is assigned to Rhodia Fiber and Resin Intermediates of Courbevoie Cedex, France by virtue of an assignment recorded May 7, 2001 on Reel 011778, Frame 0436. Cotting et al '259 and the present application were, at the time the present invention was made, owned by or subject to an obligation of assignment to the same person. According to 35 U.S.C. §103(c), subject matter which qualifies as prior art under 35 U.S.C. §103(a) via 35 U.S.C. §102(e) may be disqualified as prior art if the subject matter of the reference and the claimed invention "were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person."

Applicants also note for the record that the §102(e) date of Cotting et al '259 is October 28, 1999. The present application was filed under the provisions of 35 U.S.C. §371 and has an effective international filing date of June 24, 1999 which is prior to the §102(e) date of the reference. It is noted that the corresponding WO publication has a publication date of August 1, 1996.

For the above reasons, the §103(a) rejection over Cotting et al '259 should be withdrawn. Such action is respectfully requested.

Claims 22-24, 28, 29 and 31-36 also were rejected on the ground of obviousness double patenting over claims 1-10 of Cotting et al '259 for reasons provided in paragraph (10) of the Office Action. Reconsideration of this rejection is requested for at least the following reasons.

The process claimed in Cotting et al '259 calls for reacting an aminonitrile and water in the presence of a specified solid catalyst in a molar ratio of water to aminonitrile of 0.5 to 50 (claim 7) or 1 to 20 (claim 10) at a temperature of 200°-450°C (claim 8) or 250°-400°C (claim 11). The process steps recited in the present claims are not disclosed in this document nor are they set forth in the claims thereof.

As discussed above, the claimed process is not suggested in the prior art and further, produces unexpected results not mentioned in the art. The present claims clearly define a process which is patentably distinct from the process set forth in the claims of Cotting et al '259.

For at least these reasons, the obviousness double patenting rejection should be reconsidered and withdrawn. Such action is earnestly solicited.

The objections to claims 23 and 24 specified in paragraph (11) of the Official Action have been obviated by the present amendments. Applicants appreciate calling their attention to these typographical errors.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at his earliest convenience.

Respectfully submitted,

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